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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/762,430	01/22/2004	John J. Borzym	TMA-105-B	5191

7590 09/01/2011  
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EXAMINER
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RACHUBA, MAURINA T

ART UNIT	PAPER NUMBER
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3727

MAIL DATE	DELIVERY MODE
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09/01/2011

PAPER

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UNITED STATES PATENT AND TRADEMARK OFFICE

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BEFORE THE BOARD OF PATENT APPEALS  
AND INTERFERENCES

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*Ex parte* JOHN J. BORZYM

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Appeal 2009-012918  
Application 10/762,430  
Technology Center 3700

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Before: WILLIAM F. PATE III, JENNIFER D. BAHR, and  
JOHN C. KERINS, *Administrative Patent Judges*.

PATE III, *Administrative Patent Judge*.

DECISION ON APPEAL

## STATEMENT OF CASE

Appellant appeals under 35 U.S.C. § 134 from a rejection of claims 1, 3-6, 10 and 11. We have jurisdiction under 35 U.S.C. § 6(b).

We affirm-in-part.

The claims are directed to supported shear for shearing thin-walled tubing without deformation. Claim 1, reproduced below, is illustrative of the claimed subject matter:

1. In a supported shear of the type which shears tube stock by lateral displacement of adjacent lengths of stock along a shear plane extending orthogonally through the stock:

a mandrel to be placed within the stock;

stationary tooling for receiving and holding said stock;

movable tooling adjacent the stationary tooling for receiving said stock; and

means including first and second hydraulic cylinders for alternately driving said movable tooling in opposite directions through an orbital path relative to the stationary tooling.

## REFERENCES

The prior art relied upon by the Examiner in rejecting the claims on appeal is:

Ward	US 3,874,122	Apr. 1, 1975
Carmichael	US 4,003,279	Jan. 18, 1977

## REJECTION

Claims 1, 3-6, 10 and 11 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Carmichael and Ward. Ans. 3.

OPINION

We have carefully reviewed the rejection on appeal in light of the arguments of the Appellant and the Examiner. As a result of this review, we have reached the conclusion that the applied prior art establishes the prima facie obviousness of claims 1, 3, 4, 10 and 11. The applied prior art does not establish the prima facie obviousness of claims 5 and 6. Therefore the rejection of claims 1, 3, 4, 10 and 11 is affirmed and the rejection of claims 5 and 6 is reversed. Our reasons follow.

With respect to claim construction, we will not construe the limitation “means including first and second hydraulic cylinders” found in claim 1 under 35 U.S.C. § 112, sixth paragraph, inasmuch as the claim includes the structure of the first and second hydraulic cylinders.

On the other hand, we construe the “power means for causing simultaneous linear translation of said first and second rack[s]” in claim 4 under 35 U.S.C. § 112, sixth paragraph. We construe this structure as explained in the first sentence of paragraph [0036] on page 9 of the Specification and its equivalents.

Turning to the “means for varying the power level of said hydraulic power means” in claim 5, we construe this means as the hydraulic spool valves 136, 137, 138 in paragraph [0035] of the Specification and Figure 8 and their equivalents.

Finally, in claim 10 we construe the “means for alternately driving the second, moveable die” under 35 U.S.C. § 112, sixth paragraph. We construe this means as a double acting hydraulic cylinder or two single acting hydraulic cylinders and their equivalents. See, e.g., cylinders 62 and 64 in paragraph [0035] of the specification.

With respect to the scope and content of the prior art and the differences between the prior art and the claimed subject matter, we adopt as our own the Examiner's findings of fact on page 3 and on page 4 of the Answer up to line 11 on page 4. We do not adopt the Examiner's findings starting with the finding regarding "means for varying power level of the hydraulic power means." We further add that Carmichael notes that any suitable drive means can be utilized to drive the chain that rotates Carmichael's moveable die 4. *See* Carmichael, col. 3, ll. 60-61. We further note that slide 8 of Carmichael is operated by pneumatic or hydraulic ram pressure and that pneumatic or hydraulic ram pressure is thus available at the cutting stand and could conveniently be utilized in rotating the moveable die 4 to shear tube 13. *See* col. 3, ll. 61-67. With respect to Ward, we note that Ward discloses an off-the-shelf hydraulic rotary actuator illustrated in Figure 2 that uses pneumatic or hydraulic pressure and racks to turn a drive pinion. *See* Ward, col. 2, ll. 39-61; col. 3, ll. 34-40; col. 4, ll. 5-8 and Figure 2.

Inasmuch as Carmichael is silent with respect to the mechanical movement or motor used to drive the chain 12, and inasmuch as Carmichael has pneumatic or hydraulic power available on the cutting stand for actuation of ram 8, and inasmuch as Ward discloses an off-the-shelf pneumatic or hydraulic ram-actuated high torque motor useful for imparting rotary motion to a driven pinion 16, one of ordinary skill would have found it obvious to use the disclosed motor of Ward as a suitable prime mover for driving the movable die 4 of the tubing cutter of Carmichael. In our view, this is combining prior art elements according to known methods to yield a predictable result and would have been obvious to one of ordinary skill. In our view Carmichael clearly states that one of ordinary skill could choose a suitable motor for the disclosed tubing cutter. The presence of hydraulic or

pneumatic pressure on the cutting stand and the presence of controls for such pressure to actuate ram 8 would have suggested to one of ordinary skill that hydraulic or pneumatic controls and ram motors would be suitable devices to power chain 12. Therefore, one of ordinary skill would have found it obvious to use the ram actuated pinion and rack disclosed in Ward to drive the tubing cutter of Carmichael.

Appellant argues that this combination is based on hindsight. App. Br. 4. We do not agree. In our view, this is the simple substitution of one known motor to obtain predictable results where the prior art suggests that one of ordinary skill would have been able to select a suitable motor. Appellant's other basic argument is that Ward is not analogous art. App. Br. 6. While we acknowledge that Ward does not appear to have been from Appellant's field of endeavor, we believe that Ward is reasonably pertinent to the problem with which Appellant was concerned. Appellant states that this problem was making a supported shear operate more advantageously. We believe that this problem includes the selection of mechanical movements and concomitant drive motors for use in a supported shearing apparatus. Ward merely shows an off-the-shelf pneumatic or hydraulic motor suitable for rotating the movable die 4 in Carmichael. Therefore, Appellant's non-analogous art argument is not credited.

Dependent claims 3, 4, and 11 have not been separately argued. They fall with independent claims 1 and 10.

With respect to claims 5 and 6, these claims are argued separately. App. Br. 6; Reply 3. We agree with Appellant that neither Carmichael nor Ward renders the subject matter thereof *prima facie* obvious based on our claim construction stated above. In fact, Ward and Carmichael are generally silent as respecting the hydraulic circuitry to drive the rams. The Examiner's

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speculation about the control of these rams on page 4 of the Answer has not been credited. Accordingly, the rejection of claims 5 and 6 is reversed.

#### DECISION

The rejection of claims 1, 3, 4, 10, and 11 under 35 U.S.C. § 103 is affirmed.

The rejection of claims 5 and 6 under 35 U.S.C. § 103 is reversed.

No time period for taking any subsequent action in connection with this appeal may be extended under 37 C.F.R. § 1.136(a). *See* 37 C.F.R. § 1.136(a)(1)(iv).

#### AFFIRMED-IN-PART

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